



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
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www.miamidade.gov/economy

NOTICE OF ACCEPTANCE (NOA)

Flex Membrane International
2670 Leisch's Bridge Road, Suite 400
Leesport, PA. 19533

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Flex TPO Single Ply Roofing System over Recover Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA consists of pages 1 through 16.

The submitted documentation was reviewed by Alex Tigera.



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ROOFING SYSTEM APPROVAL

| | |
|---------------------------------------|------------------------|
| <u>Category:</u> | Roofing |
| <u>Sub-Category:</u> | Single Ply Roofing |
| <u>Material:</u> | TPO |
| <u>Deck Type:</u> | Recover |
| <u>Maximum Design Pressure</u> | See Specific Deck Type |

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

| <u>Product</u> | <u>Dimensions</u> | <u>Test Specification</u> | <u>Product Description</u> |
|--|--------------------------|----------------------------------|---|
| Flex TPO II | Various | TAS 131 ASTM D 6878 | Thermoplastic olefin reinforced membrane. |
| Flex TPO II FB | Various | TAS 131 ASTM D 6878 | Thermoplastic olefin reinforced, fleece backed membrane. |
| Flex EG WB 181 TPO Bonding Adhesive | 5 gallons | Proprietary | Water based adhesive for fully adhered systems and membrane flashing. |
| Pliobond® 2825 Bonding Adhesive | 5 gallon | Proprietary | Adhesive for fully adhered systems and membrane flashing. |
| LA505 Bonding Adhesive for TPO Membranes | 5 gallon | Proprietary | A contact type bonding adhesive for TPO single ply roofing membranes and flashings. |
| Flex EG TPO Cut Edge Sealant | 1 quart squeeze tube | Proprietary | Solvent based sealant for TPO cut edges. |

APPROVED INSULATIONS:

TABLE 2

| <u>Product Name</u> | <u>Product Description</u> | <u>Manufacturer (With Current NOA)</u> |
|-----------------------------------|-----------------------------------|---|
| Flex EG Polyiso | Polyisocyanurate foam insulation | GAF Materials Corp. |
| Securock® Gypsum-Fiber Roof Board | Gypsum board | USG Corp. |
| DensDeck® Roof Board | Gypsum board | Georgia Pacific |
| Structodek® | High-density fiberboard | Blue Ridge FiberBoard, Inc |



APPROVED FASTENERS:

TABLE 3

| <u>Fastener Number</u> | <u>Product Name</u> | <u>Product Description</u> | <u>Dimensions</u> | <u>Manufacturer (With Current NOA)</u> |
|------------------------|--|--|-----------------------------------|--|
| 1 | Drill-Tec™ XHD Fastener | #15 Self tapping coated screw w/#3 Phillips head | various | OMG Inc. |
| 2. | Drill-Tec™ XHD Plate | Galvalume® coated double barbed steel plate used with fastener | Plate Diameter: 2-3/8" | OMG Inc. |
| 3. | Drill-Tec™ SXHD Plate | 2 3/4 in. double barbed plate | Plate Diameter: 2-3/4 in. | OMG Inc. |
| 4. | Drill-Tec™ SXHD | #21 Self tapping coated carbon steel screw w/#3 Phillips head | various | OMG Inc. |
| 5. | OlyBond, OlyBond 500®, OlyBond® 500® Green Adhesive Fastener | Dual component adhesive fastener | N/A | OMG Inc. |
| 6. | Drill-Tec™ RhinoBond® TPO SXHD Plate | Galvalume® coated steel plate with a translucent TPO coating on the top side | 3.15" 0.297" diameter center hole | OMG Inc. |
| 7. | Drill-Tec™ RhinoBond® TPO XHD Plate | Galvalume® coated steel plate with a translucent TPO coating on the top side | 3.15" 0.270" diameter center hole | OMG Inc. |
| 8. | Drill-Tec™ Eyehook Accuseam Plates | Galvalume® coated steel 3" Square | 3" | OMG Inc. |

EVIDENCE SUBMITTED:

| <u>Test Agency/Identifier</u> | <u>Name</u> | <u>Report</u> | <u>Date</u> |
|---|---------------------|------------------|-------------|
| Factory Mutual Research Corporation | 4470 | 3034749 | 10.16.2008 |
| | 4470 | 3030813 | 11.05.2007 |
| | 4470 | 3034394 | 02.27.2009 |
| | 4470 | 3033135 | 11.24.2008 |
| | 4470 | 3024051 | 03.28.2006 |
| | 4470 | 3036141 | 08.10.2009 |
| | 4470 | 3031350 | 09.27.2007 |
| | 4470 | 3032856 | 11.24.2008 |
| | 4470 | 3038318 | 12.10.2010 |
| | 4470 | 3036614 | 06.09.2009 |
| | 4470 | 3040234 | 02.23.2011 |
| | Physical Properties | GAF-270-02-02 | 11.15.2010 |
| PRI Construction Materials Technologies | E 2178 | GAF-276-02-01REV | 01.03.2011 |
| Underwriters Laboratories Inc. | Physical Properties | 09CA55838 | 11.04.2010 |
| Exterior Research & Design, LLC | TAS 131 | 18029.12.02-1 | 12.06.2002 |

MIAMI-DADE COUNTY
APPROVED

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APPROVED ASSEMBLIES:

Membrane Type: Single Ply, Thermoplastic, TPO
Deck Type 7I: Recover Insulated
Deck Description: Existing, FM approved, asphaltic roof cover installed above structural concrete deck.

System Type A:

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

| <u>Insulation Layer</u> | <u>Insulation Fasteners (Table 3)</u> | <u>Fastener Density/ft²</u> |
|--|---|--|
| DensDeck® Prime® Roof Board, Securock® Gypsum-Fiber Roof Board Minimum .25" thick | N/A | N/A |

Note: All Insulation board are adhered to the existing asphaltic roof cover with OlyBond 500® Adhesive applied in ¾ - 1 inch wide beads spaced 12 in o.c. and walked in. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Flex TPO II with minimum side laps 3" wide and sealed with a 1.5" wide heat weld positioned on the outer edge of the lap and adhered to insulation as follows.

DensDeck® Prime Roof Board Pliobond® 2825 Bonding Adhesive applied at a total rate of 1.67 gal/sq. Half of the adhesive is applied to the substrate and the other half is applied to the back surface of the roof cover. The top of the roof cover is broomed and rolled with a weighted roller.
Or
Adhered with Flex EG WB 181 TPO Bonding Adhesive applied at a rate of 0.84 gal./sq to 1.0 gal./sq. One fourth of the adhesive is applied to the underside of the roof cover and three fourths is applied to the substrate. The adhesive is allowed to become tacky to the touch before the roof cover is applied to the substrate. The top of the roof cover is broomed and rolled with a weighted roller.

Securock® Gypsum-Fiber Pliobond® 2825 Bonding Adhesive applied at a total rate of 1.67 gal/sq. or LA505 Bonding Adhesive is applied at a rate of 0.91 gal/sq. Half of the adhesive is applied to the substrate and the other half is applied to the back surface of the roof cover. The top of the roof cover is broomed and rolled with a weighted roller.

Maximum Design Pressure: -120 psf; (See General limitation #9)



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Membrane Type: Single Ply, Thermoplastic, TPO

Deck Type 7I: Recover Insulated

Deck Description: 22 gauge steel deck secured to minimum 0.25" thick steel structural supports spaced maximum, 72" o.c. with ICH Traxx/5, ICH Traxx/4, Teks 4 or Teks 5 fasteners spaced 6" o.c. at each bearing. Deck side laps are secured 24" o.c. with ICH Traxx/1 or Stitch Teks 1 fasteners.

System Type C(1): Insulation is mechanically attached to roof deck. Membrane fully adhered to insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

| <u>Insulation Layer</u> | <u>Insulation Fasteners (Table 3)</u> | <u>Fastener Density/ft²</u> |
|---|---|--|
| DensDeck Prime [®] Roof Board Minimum .25" thick | 1, 2, 8 | 1.45 ft ² |
| Securock [®] Gypsum-Fiber Roof Board Minimum .25" thick | 1, 2, 8 | 1.6 ft ² |

Note: Insulation 48 x 96 in. is fastened to the steel deck with Drill-Tec[™] #12 Fasteners or Drill-Tec[™] #14 Fasteners and Drill-Tec[™] AccuTrac[®] Flat Plates or Drill-Tec[™] 3" Standard Steel Plate. Additional layers of insulation shall be adhered with OlyBond 500[®] or OlyBond 500[®] Green, asphalt, or mechanically fastened. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Flex TPO II or Flex TPO II FB adhered to the insulation with Pliobond[®] 2825 Bonding Adhesive applied at a rate of 1.67 gal./sq. or with LA505 Bonding Adhesive applied at a rate of 0.92 gal./sq. Half of the adhesive is applied to the substrate and the other half is applied to the back surface of the roof cover. or adhered with Flex EG WB 181 TPO Bonding Adhesive applied at a rate of 0.84 gal./sq to 1.0 gal./sq. One fourth of the adhesive is applied to the underside of the roof cover and three fourths is applied to the substrate. The adhesive is allowed to become tacky to the touch before the roof cover is applied to the substrate. Minimum side laps 3" wide and sealed with a 1.5" wide heat weld positioned on the outer edge of the lap. The top of the roof cover is broomed and rolled with a weighted roller.

Maximum Design Pressure: -52.5 psf; when using Pliobond[®] 2825 Bonding Adhesive, or Flex EG WB 181 TPO Bonding Adhesive (See General limitation #7)

-45 psf; when using LA505 Bonding Adhesive (See General limitation #7)



Membrane Type: Single Ply, Thermoplastic, TPO

Deck Type 7I: Recover Insulated

Deck Description: 22 gauge steel deck secured to minimum 0.25" thick steel structural supports spaced maximum, 72" o.c. with ICH Traxx/5, ICH Traxx/4, Teks 4 or Teks 5 fasteners spaced 6" o.c. at each bearing. Deck side laps are secured 24" o.c. with ICH Traxx/1 or Stitch Teks 1 fasteners.

System Type (C2): Insulation is mechanically attached to roof deck. Membrane fully adhered to insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

| <u>Insulation Layer</u> | <u>Insulation Fasteners (Table 3)</u> | <u>Fastener Density/ft²</u> |
|--|---|--|
| Structodek [®] Minimum 0.5" - 1" thick | 1, 2, 8 | 1 ft ² |

Note: Insulation 48 x 48 in. is fastened to the steel deck with Drill-Tec[™]#12 Fasteners or Drill-Tec[™]#14 Fasteners Drill-Tec[™] 3" Steel Plates, Drill-Tec[™] 3" Standard Steel Plates, Drill-Tec[™] AccuTrac[®] Flat Plates or Drill-Tec[™] AccuTrac Recessed Plates. Additional layers of insulation shall be adhered with OlyBond 500[®] or OlyBond 500[®] Green, asphalt, or mechanically fastened. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Flex TPO II or Flex TPO II FB adhered to the insulation with Flex EG WB 181 TPO Bonding Adhesive applied at a rate of 0.84 gal./sq to 1.0 gal./sq. One fourth of the adhesive is applied to the underside of the roof cover and three fourths is applied to the substrate. The adhesive is allowed to become tacky to the touch before the roof cover is applied to the substrate. Minimum side laps 3" wide and sealed with a 1.5" wide heat weld positioned on the outer edge of the lap. Broom the top of the roof cover and rolled with a weighted roller.

Maximum Design Pressure: -67.5 psf; (See General limitation #7)



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Membrane Type: Single Ply, Thermoplastic, TPO

Deck Type 7I: Recover Insulated

Deck Description: 22 gauge, steel deck secured to 0.25" thick structural supports spaced at 72" o.c. using two Teks 5 fasteners and 3/4" washers spaced 6" o.c. along each support. The deck side laps are fastened with Stitch Teks 1 fastener spaced at 12" o.c. along each side lap.

System Type D(1): Insulation preliminarily attached; membrane mechanically fastened through insulation to roof deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

| <u>Insulation Layer</u> | <u>Insulation Fasteners (Table 3)</u> | <u>Fastener Density/ft²</u> |
|--|---|--|
| DensDeck® Roof Board, Securock® Gypsum-Fiber Roof Board Minimum .25" thick | N/A | N/A |
| Structodek®, EnergyGuard™ Perlite Recover Board Minimum .5" thick | N/A | N/A |
| EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1" thick | N/A | N/A |

Note: Insulation is preliminary attached through the existing roof deck. Additional layers of insulation shall be adhered with OlyBond 500® or OlyBond 500® Green, asphalt or mechanically fastened. Maximum insulation thickness is 1 inch. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Flex TPO II or Flex TPO II FB attached through the preliminary attached insulation as follows.

Drill-Tec™ XHD Plates and Drill-Tec™ XHD Fasteners spaced 6" o.c. within laps spaced 114" o.c. Side laps are minimum 6" wide and sealed with a minimum 1.625" wide heat weld positioned on the outer edge of the laps.

Maximum Design Pressure: -52.5 psf; (See General limitation #7)



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Membrane Type: Single Ply, Thermoplastic, TPO

Deck Type 7I: Recover Insulated

Deck Description: 22 gauge, steel deck secured to 0.25" thick structural supports spaced at 72" o.c. using two Tek's 5 fasteners and 3/4" washers spaced 6" o.c. along each support. The deck side laps were fastened with Stitch Tek's 1 fastener spaced at 12" o.c. along each side lap.

System Type D(2): Membrane mechanically fastened through insulation to roof deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

| <u>Base Insulation Layer</u> | <u>Insulation Fasteners (Table 3)</u> | <u>Fastener Density/ft²</u> |
|---|--|---|
| EnergyGuard™ RN Polyiso Insulation, Minimum .5" thick | N/A | N/A |
| <u>Top Insulation Layer</u> | <u>Insulation Fasteners (Table 3)</u> | <u>Fastener Density/ft²</u> |
| Structodek®, EnergyGuard™ Perlite Recover Board Minimum .5" thick | N/A | N/A |
| DensDeck® Roof Board, Securock® Gypsum-Fiber Roof Board Minimum .25" - .5" thick | N/A | N/A |

Note: Insulation is preliminarily attached on the existing roof. Coverboard pre-secured through the insulation and existing roof deck. Maximum total insulation and cover board thickness is 1 inch.

Membrane: Flex TPO II or Flex TPO II FB attached through the preliminary attached insulation as follows:

Drill-Tec™ XHD Plates and Drill-Tec™ XHD Fasteners spaced 6" o.c. within laps spaced 14" o.c. Side laps minimum 6" wide and sealed with a minimum 1.625" wide heat weld positioned on the outer edge of the laps.

Maximum Design Pressure: -52.5 psf; (See General limitation #7)



| | |
|--------------------------|---|
| Membrane Type: | Single Ply, Thermoplastic, TPO |
| Deck Type 7I: | Recover Insulated |
| Deck Description: | 18, 20 or 22 gauge, 1.5" deep, type B wide rib steel roof deck is secured to minimum 0.25" thick structural supports spaced at maximum 72" o.c. with Tek 4, Tek 5, ICH Traxx/5 fasteners spaced at maximum 6" o.c. at the support. The deck side laps are secured with Stitch Tek 1 or ICH Traxx/1 fasteners spaced at a max 24" o.c. |
| System Type D(3): | Insulation preliminarily attached; membrane mechanically fastened through insulation to roof deck. |

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

| <u>Base Insulation Layer</u> | <u>Insulation Fasteners (Table 3)</u> | <u>Fastener Density/ft²</u> |
|---|--|---|
| EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation, EnergyGuard™ RM Polyiso Insulation Minimum 1.5" thick | N/A | N/A |
| DensDeck® Roof Board Minimum .25" thick | N/A | N/A |
| EnergyGuard™ Perlite Recover Board Minimum .5" thick | N/A | N/A |
| EnergyGuard™ Perlite Roof Insulation Minimum .75" thick | N/A | N/A |
| <u>(Optional) Top Insulation Layer</u> | <u>Insulation Fasteners (Table 3)</u> | <u>Fastener Density/ft²</u> |
| DensDeck® Roof Board Minimum .25" thick | N/A | N/A |
| EnergyGuard™ Perlite Recover Board Minimum .5" thick | N/A | N/A |
| EnergyGuard™ Perlite Roof Insulation Minimum .75" thick | N/A | N/A |

Note: Insulation is preliminary attached through the existing roof deck. Additional layers of insulation shall be adhered with OlyBond 500® or OlyBond 500® Green, asphalt or mechanically fastened. Please refer to Roofing Application Standard RAS 117 for insulation attachment.



- Membrane:** Flex TPO II or Flex TPO II FB attached through the insulation to the deck as described below:
- Fastening #1** Flex TPO II or Flex TPO II FB is secured with Drill-Tec™ SXHD Plates and Drill-Tec™ SXHD Fasteners spaced maximum 6" o.c. with laps spaced at maximum 114" o.c. Side laps are minimum 6" wide and sealed with a minimum 1.875" wide heat weld.
Maximum Design Pressure: -60 psf; (See General limitation #7)
- Fastening #2** Flex TPO II or Flex TPO II FB is secured with Drill-Tec™ XHD Plates and Drill- Tec™ XHD Fasteners spaced maximum 6" o.c. with laps spaced at maximum 54" o.c. Side laps are minimum 6" wide and sealed with a minimum 1.5" wide heat weld.
Maximum Design Pressure: -60 psf; (See General limitation #7)
- Fastening #3** Flex TPO II or Flex TPO II FB is secured with Drill-Tec™ XHD Plates and Drill-Tec™ XHD Fasteners spaced maximum 6" o.c. with laps spaced at maximum 90" o.c. Side laps are minimum 6" wide and sealed with a minimum 1.5" wide heat weld.
Maximum Design Pressure: -45 psf; (See General limitation #7)
- Fastening #4** Flex TPO II or Flex TPO II FB is secured with Drill-Tec™ XHD Plates and Drill-Tec™ XHD Fasteners or Drill-Tec™ SXHD Plates and Drill-Tec™ SXHD fasteners spaced maximum 12" o.c. with laps spaced at maximum 54" o.c. Side laps are minimum 6" wide and sealed with a minimum 1.5" wide heat weld.
Maximum Design Pressure: -45 psf; (See General limitation #7)
- Maximum Design Pressure:** See Fastening Option above

Membrane Type: Single Ply, Thermoplastic, TPO

Deck Type 7I: Recover Insulated

Deck Description: Minimum 22 gauge steel deck, grade 80, is secured to minimum 0.25" thick steel structural supports spaced maximum 72" o.c. with ICH Traxx/5 fasteners spaced 6" o.c. at each bottom rib. Deck side laps are secured 24" o.c. with ICH Traxx/1 fasteners.

System Type D(4): Membrane mechanically fastened through insulation to roof deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

| <u>Insulation Layer</u> | <u>Insulation Fasteners (Table 3)</u> | <u>Fastener Density/ft²</u> |
|--|---|--|
| DensDeck® Roof Board, Securock® Gypsum-Fiber Roof Board Minimum .25" - .625" thick | N/A | N/A |
| EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, Minimum 1" thick | N/A | N/A |
| EnergyGuard™ RN Polyiso Insulation, EnergyGuard™ RN Tapered Polyiso Insulation, Structodek® Minimum .05" - 1" thick | N/A | N/A |

Note: Insulation is preliminary attached through the existing steel deck. Additional layers of insulation shall be adhered with OlyBond 500® or OlyBond 500® Green, asphalt, or mechanically fastened. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Flex TPO II or Flex TPO II FB is secured with Drill-Tec™ RhinoBond® TPO SXHD Plate or Drill-Tec™ RhinoBond® TPO XHD Plate with Drill-Tec™ SXHD fasteners. Stress plates and fasteners are placed on a 24" x 24" grid. The roof cover is bonded to stress plates using the RhinoBond® Portable Bonding Tool. Weighted cooling magnets are placed over the bonded membrane/plates for a minimum of 45 seconds. Side laps are minimum 3" wide and sealed with a minimum 1.5" wide heat weld positioned on the outer edge of the lap.

Maximum Design Pressure: -60 psf; (See General limitation #7)



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Membrane Type: Single Ply, Thermoplastic, TPO

Deck Type 7I: Recover Insulated

Deck Description: Minimum 22 gauge steel deck, grade 80, is secured to minimum 0.25" thick steel structural supports spaced maximum 72" o.c. with ICH Traxx/5 fasteners spaced 6" o.c. at each bottom rib. Deck side laps are secured 24" o.c. with ICH Traxx/1 fasteners.

System Type D(5): Membrane mechanically fastened through insulation to roof deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

| <u>Insulation Layer</u> | <u>Insulation Fasteners (Table 3)</u> | <u>Fastener Density/ft²</u> |
|--|---|--|
| DensDeck® Roof Board, Securock® Gypsum-Fiber Roof Board Minimum .25" - .625" thick | N/A | N/A |
| EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, Minimum 1" thick | N/A | N/A |
| EnergyGuard™ RN Polyiso Insulation, EnergyGuard™ RN Tapered Polyiso Insulation, Structodek® Minimum .05" - 1" thick | N/A | N/A |

Note: Insulation is preliminary attached through the existing roof deck. Additional layers of insulation shall be adhered with OlyBond 500® or OlyBond 500® Green, asphalt, or mechanically fastened. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Flex TPO II or Flex TPO II FB is secured with Drill-Tec™ RhinoBond® TPO XHD Plates with Drill-Tec™ XHD Fasteners. Apply fasteners at a rate of 6 fasteners per 48" x 96" board. Fasteners are located 6" from the 96" board dimensions and 12" and 48" from the 48" board dimensions. The roof cover is bonded to stress plates using RhinoBond Portable Bonding Tool. Weighted cooling magnets are placed over the bonded membrane/plates for a minimum of 45 seconds. Side laps are minimum 3" wide and sealed with a minimum 1.5" wide heat weld. positioned on the outer edge of the lap

Maximum Design Pressure: -45 psf; (See General limitation #7)



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Membrane Type: Single Ply, Thermoplastic, TPO

Deck Type 7I: Recover Insulated

Deck Description: 18 gauge 1.5" type B, wide rib, 1.5 in. deep is secured to minimum 0.25 in. thick structural supports spaced maximum 72 in. o.c. with Teks 4, Teks 5, ICH Traxx/4 or ICH Traxx/5 fasteners spaced maximum 6 in. o.c. along each support. Deck side laps are fastened with Stitch Teks 1 or ICH Traxx/1 fasteners spaced maximum 24 in. o.c.

System Type D(6): Membrane mechanically fastened through insulation to roof deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

| <u>Insulation Layer</u> | <u>Insulation Fasteners (Table 3)</u> | <u>Fastener Density/ft²</u> |
|--|---|--|
| DensDeck® Roof Board, Securock® Gypsum-Fiber Roof Board Minimum .25" thick | N/A | N/A |
| Structodek®, EnergyGuard™ Perlite Recover Board Minimum .5" thick | N/A | N/A |
| EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation Minimum 1" thick | N/A | N/A |

Note: 4' x 4' Insulation board preliminary fastened to the roof deck. Maximum insulation thickness is 1 inch. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Flex TPO II mechanically fastened to steel or concrete deck as follows.

Drill-Tec™ XHD Fastener and Drill-Tec™ Eyehook Accuseam Plates maximum 6" o.c. placed within minimum 6" wide side laps which are spaced at maximum 14 in o.c. Laps are sealed with minimum 1.625 in. wide heat welds positioned on the outer edge of the lap.

Maximum Design Pressure: -52.5 psf; (See General limitation #7)



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Membrane Type: Single Ply, Thermoplastic, TPO

Deck Type 7I: Recover Insulated

Deck Description: 18 gauge 1.5" type B, wide rib, 1.5 in. deep is secured to minimum 0.25 in. thick structural supports spaced maximum 72 in. o.c. with Teks 4, Teks 5, ICH Traxx/4 or ICH Traxx/5 fasteners spaced maximum 6 in. o.c. along each support. Deck side laps are fastened with Stitch Teks 1 or ICH Traxx/1 fasteners spaced maximum 24 in. o.c.

System Type D(7): Membrane mechanically fastened through insulation to roof deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

| <u>Base Insulation Layer</u> | <u>Insulation Fasteners (Table 3)</u> | <u>Fastener Density/ft²</u> |
|---|---|--|
| EnergyGuard™ RN Polyiso Insulation Minimum .5" thick | N/A | N/A |
| <u>Top Insulation Layer</u> | <u>Insulation Fasteners (Table 3)</u> | <u>Fastener Density/ft²</u> |
| DensDeck® Roof Board, Securock® Gypsum-Fiber Roof Board Minimum .25" thick | N/A | N/A |
| Structodek®, EnergyGuard™ Perlite Recover Board Minimum .5" thick | N/A | N/A |

Note: 4' x 4' Insulation board is loose laid on the existing roof. Cover board is preliminary fastened through the insulation to the roof deck. Maximum insulation thickness is 1 inch. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Flex TPO II mechanically fastened to steel or concrete deck as follows.

Drill-Tec™ XHD Fastener and Drill-Tec™ Eyehook Accuseam Plates or Drill-Tec™ Eyehook Seam Plate spaced maximum 6" o.c. placed within minimum 6" wide side laps which are spaced at maximum 114 in o.c. Laps are sealed with minimum 1.625 in. wide heat welds positioned on the outer edge of the lap.

Maximum Design Pressure: -52.5 psf; (See General limitation #7)



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Membrane Type: Single Ply, Thermoplastic, TPO
Deck Type 7I: Recover Non-Insulated
Deck Description: 2500 psi Structural Concrete or minimum 22 gauge steel deck
System Type F: Membrane adhered to existing granular roof system.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Vapor Retarder: (Optional) Any UL or FMRC approved vapor retarder may be installed over the deck.

Membrane: Flex TPO II FB is fully adhered to an existing granule surfaced roof covering using hot asphalt applied at 25 lbs./sq.

Maximum Design Pressure: -405 psf; (See General Limitation #9)



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RECOVER SYSTEM LIMITATIONS:

1. All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.

Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.

5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. Insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117 and/or RAS 137. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 9N-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE